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A proposed amendment is attached.

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The following is a complete listing of claims in this application.

1. (currently amended) A device to correct interference errors in a measuring installation (A), ~~that includes~~ comprising:

at least two magnetic sensors ($1_1$, $1_2$) for measuring the position of mobile elements ($2_1$, $2_2$) that are moving along adjacent trajectories, where each magnetic measuring sensor ($S_1$, $S_2$) delivers a measurement signal that is representative of the position of the mobile element in an open magnetic circuit ($3_1$, $3_2$),

and resources (M) for processing the measurement signals delivered by the magnetic measuring sensors,

~~characterised in that~~ wherein the processing resources (M) include resources for correction of the magnetic measurement signals in order to take account of interference errors between the adjacent magnetic sensors ($1_1$, $1_2$) with a view to obtaining a corrected measurement signal ($S_{1c}$, $S_{2c}$) for each magnetic measuring sensor.

2. (currently amended) A device according to claim 1, ~~characterised in that~~ wherein the correction resources correct the measurement signal ($S_1$, $S_2$) of each magnetic measuring sensor ($1_1$, $1_2$) according to the value of the measurement signals of the magnetic measuring sensor concerned and of the other magnetic measuring sensors.

3. (currently amended) A device according to claim 1, ~~characterised in that~~ wherein the processing resources (M) deliver a corrected measurement signal for each magnetic measuring sensor such that:

$$S_{1c}=\sum_{i=1}^{n}\left(\sum_{j=0}^{i}\alpha_{ij}S_1^jS_2^{i-j}\right)$$

$$S_{2c}=\sum_{i=1}^{n}\left(\sum_{j=0}^{i}\alpha'_{ij}S_2^jS_1^{i-j}\right)$$

where $\alpha$, $\alpha'$ are correction coefficients
and n is the correction order.

4. (currently amended) A device according to claim 3, ~~characterised in that~~ wherein, for each magnetic measuring sensor ($1_1$, $1_2$), the processing resources (M) deliver a corrected measurement signal such that for a correction order of $n = 3$, $\alpha$, i, j and $\alpha'$ are such that:

$\alpha_{10} = a-c$, $\alpha_{11} = 1+c$

$\alpha'_{10} = a'-c'$, $\alpha'_{11} = 1+c'$

$\alpha_{20} = 0 = \alpha'_{20}$, $\alpha_{21} = \alpha'_{21} = 0$, $\alpha_{22} = \alpha'_{22} = 0$

$\alpha_{30} = -b$, $\alpha_{31} = 3b$, $\alpha_{32} = -3b$, $\alpha_{33} = b$

$\alpha'_{30} = -b'$, $\alpha'_{31} = 3b'$, $\alpha'_{32} = -3b'$, $\alpha'_{33} = b'$

where a, b, c, a', b', c' are correction coefficients so that:

$$S_{1c} = (1 + c)S_1 + (a - c)S_2 + 3bS_1 S_2^2 - 3bS_1^2 S_2 + bS_1^3 - bS_2^3$$

$$S_{2c} = (1 + c')S_2 + (a' - c')S_1 + 3b'S_2S_1^2 - 3b'S_2^2S_1 + b'S_2^3 - b'S_1^3$$

or

$$S_{1c} = S_1 + aS_2 + b(S_1 - S_2)^3 + c(S_1-S_2)$$

and

$$S_{2c} = S_2 + a'S_1 + b'(S_2-S_1)^3 + c'(S_2-S_1)$$

5. (currently amended) A device according to claim 3, ~~characterised in that~~ wherein, for each magnetic measuring sensor ($1_1$, $1_2$), the processing resources (M) deliver a corrected measurement signal such that, for a correction order of $n = 1$, the values of $\alpha$, $\alpha'$, i, and j are such that: $\alpha_{10} = a$, $\alpha_{11} = a'$ and $\alpha'_{10} = a'$, $\alpha'_{11} = 1$ so that:

$$S_{1c} = S_1 + aS_2, \text{ and } S_{2c} = S_2 + a'S_1$$

6. (currently amended) A device according to claim 1, ~~characterised in that~~ wherein each measurement signal $S_1$ , $S_2$ is such that:

$$S_1 = \frac{S_a - S_b}{S_a + S_b}$$

$$S_2 = \frac{S_d - S_c}{S_d + S_c}$$

where $S_a$, $S_b$, and $S_c$, $S_d$ are a pair of elementary measurement signals delivered by a pair of measurement cells mounted in the open magnetic circuit.

7. (currently amended) A measuring installation ~~characterised in that it includes~~ comprising:

- a first magnetic measuring sensor ($1_1$) delivering a first measurement signal ($S_1$) for the position of a first mobile element ($2_1$) that is moving along a trajectory ($T_1$), where the value of the first measurement signal ($S_1$) depends on the position of the said mobile element in an open magnetic circuit ($3_1$),
- at least one second magnetic measuring sensor ($1_2$) delivering a second magnetic measurement signal ($S_2$) for the position of a second mobile element ($2_2$) that is moving along a trajectory ($T_2$) adjacent to the movement trajectory ($T_1$) of the first mobile element, where the value of the second measurement signal ($S_2$) depends on the position of the said mobile element in an open magnetic circuit ($3_2$)
- and a correction arrangement according to claim 1.

8. (currently amended) A measuring installation according to claim 7, ~~characterised in that~~ wherein each magnetic measuring sensor ($1_1$, $1_2$) includes resources ($4_1$, $4_2$) for the creation of a magnetic flux in a direction perpendicular to the surface ($5_1$, $5_2$) of at least one polar part from which there emanates a

magnetic leakage flux whose strength varies with the surface area of the polar part along the movement axis, where these magnetic flux creation resources ($4_1$, $4_2$) are mounted to be movable by the mobile element, forming at least one magnetic gap ($8_1$, $8_2$) with a polar part forming part of the open magnetic circuit, with each magnetic measuring sensor including at least one measuring cell ($11_1$, $11_2$) mounted in a fixed manner in the magnetic circuit close to an end point of the trajectory so as to measure the magnetic flux delivered by the creation resources less a magnetic leakage flux appearing from the polar part and varying along the trajectory.

9. (currently amended) A measuring installation according to claim ~~7~~ 8, ~~characterised in that~~ wherein the magnetic flux creation resources ($4_1$, $4_2$) of the two measuring sensors are mounted close to each other along parallel trajectories.

10. (currently amended) A measuring installation according to claim 8, ~~characterised in that~~ wherein each magnetic measuring sensor ($1_1$, $1_2$) includes a second measuring cell ($13_1$, $13_2$) mounted in a fixed manner in the magnetic circuit ($3_1$, $3_2$) close to the other trajectory end point, so as to measure the magnetic flux delivered by the creation resources ($4_1$, $4_3$) less the magnetic leakage flux.

11. (currently amended) A measuring installation according to claim 8, ~~characterised in that~~ wherein the magnetic flux creation resources ($4_1$, $4_2$) are mounted to be movable in translation.

12. (currently amended) A measuring installation according to claim 11, ~~characterised in that~~ wherein the magnetic flux creation resources ($4_1$, $4_2$) are composed of a radially or axially magnetised disk-shaped or annular element ($14_1$, $14_2$) whose axis is parallel to the movement axis in translation.

13. (currently amended) A measuring installation according to claim 11, ~~characterised in that~~ wherein the magnetic flux

creation resources are composed of a series of at least four magnets ($15_1$, $15_2$) whose directions of magnetisation are shifted, two by two, by 90°.

14. (currently amended) A measuring installation according to claim 11, ~~characterised in that~~ wherein the open magnetic circuit ($3_1$, $3_2$) includes a second polar part ($18_1$, $18_2$) placed opposite to the first polar part ($5_1$, $5_2$) forming, together with the latter, a magnetic gap ($19_1$, $19_2$).

15. (currently amended) A measuring installation according to claim 14, ~~characterised in that~~ wherein the second polar part ($18_1$, $18_2$) is equipped with resources for creation of the magnetic flux ($4_1$, $4_2$).

16. A measuring installation according to claim 14, ~~characterised in that~~ wherein the second polar part ($18_1$, $18_2$) is formed by a tubular element fitted with the radially magnetised annular element ($14_1$, $14_2$).

17. (currently amended) A measuring installation according to claim ~~13~~ 14, ~~characterised in that~~ wherein one or the other of the polar parts ($5_1$, $18_1$ - $5_2$, $18_2$) has a plane profile designed to improve the linearity of the output signal delivered by the measurement cells ($11_1$, $13_1$ - $11_2$, $13_2$).